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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,194	03/28/2001	Jan H. Labuschagne	TIMK 7938US	2895
1688 7590 04/24/2009 POLSTER, LIEDER, WOODRUFF & LUCCHESI 12412 POWERSCOURT DRIVE SUITE 200 ST. LOUIS, MO 63131-3615				
EXAMINER				
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ART UNIT		PAPER NUMBER		
3633				
MAIL DATE		DELIVERY MODE		
04/24/2009		PAPER		

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAN H. LABUSCHAGNE

Appeal 2008-4519
Application 09/819,194
Technology Center 3600

Decided:¹ April 24, 2009

Before LINDA E. HORNER, MICHAEL W. O'NEILL, and
STEFAN STAICOVICI, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*

DECISION ON APPEAL

¹ The two month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

STATEMENT OF THE CASE

Jan H. Labuschagne (Appellant) seeks our review under 35 U.S.C. § 134 of the Examiner's decision rejecting claims 1-12 and 19-29, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We REVERSE.

THE INVENTION

Railcar wheel sets are periodically removed from service and the bearings for the wheel sets are stripped and replaced with new or reconditioned bearings. Spec. 2:8-12. The bearings that are removed are then reconditioned and installed on another wheel set. Spec. 2:12-13. Reconditioning bearings requires equipment and skills not ordinarily found in a typical wheel shop, so the wheel shop ordinarily sends the bearings to a separate reconditioning facility. Spec. 2:15-18. The Appellant's claimed invention is directed to a portable facility for reconditioning antifriction bearings. Spec. 3:6-7. Claims 1 and 20, reproduced below, are representative of the subject matter on appeal.

1. A portable facility for reconditioning an antifriction bearing having components including a race provided with a raceway and rolling elements that roll along the raceway, said facility comprising:

an enclosure that is portable in the sense that it can be moved by a transport vehicle;

means within the enclosure for inspecting components of the bearing;

more means within the enclosure for repairing defects in components of the bearing; and

spare races and rolling elements located within the enclosure to replace damaged races and rolling elements.

20. A portable facility for reconditioning an antifriction bearing that was used on the journal of an axle for a railcar or locomotive and includes inner and outer races provided with opposed raceways, and rolling elements located between the races and along the raceways, said facility comprising:

an enclosure that is portable in the sense that it can be moved by a transport vehicle;

a washer containing a solution for removing grease from the races and rolling elements;

equipment within the enclosure for inspecting the races;

equipment within the enclosure for repairing the bearing; and

spare inner and outer races and rolling elements located within the enclosure to replace a damaged race or rolling element.

THE REJECTIONS

The Examiner relies upon the following as evidence of
unpatentability:

Beach	US 1,276,013	Aug. 20, 1918
Colson	US 2,034,507	Mar. 17, 1936
James	US 2,274,964	Mar. 3, 1942
Schaub	US 2,594,810	Apr. 29, 1952
Sturm, Jr. ("Sturm")	US 3,139,748	Jul. 7, 1964
Bellas	US 3,308,845	Mar. 14, 1967
Parker	US 3,402,349	Sep. 17, 1968
Dalton	US 3,580,059	May 25, 1971
Boyce	US 5,165,169	Nov. 24, 1992
Fetty	US 5,588,752	Dec. 31, 1996
Rich Diegle, "Dakota Wheel Bearing Noise" Adams Business Media Motor Service, No. 9, Vol. 80, p. 70 (Sept. 1, 2001) ("Diegle").		

The Appellant seeks review of the following Examiner's rejections:

1. Claims 1-7 and 19 under 35 U.S.C. § 103(a) as unpatentable over Bellas, Diegle, Sturm, and James.
2. Claims 8, 11, and 12 under 35 U.S.C. § 103(a) as unpatentable over Bellas, Diegle, Sturm, Colson, and Boyce.
3. Claim 9 under 35 U.S.C. § 103(a) as unpatentable over Bellas, Diegle, Sturm, Colson, Boyce, and Schaud.
4. Claim 10 under 35 U.S.C. § 103(a) as unpatentable over Bellas, Diegle, Sturm, Colson, Boyce, and Dalton.
5. Claims 20, 26, and 29 under 35 U.S.C. § 103(a) as unpatentable over Bellas, Boyce, and Diegle.
6. Claim 21 under 35 U.S.C. § 103(a) as unpatentable over Bellas, Boyce, Diegle, and Fetty.

7. Claim 22 under 35 U.S.C. § 103(a) as unpatentable over Bellas, Boyce, Diegle, and Parker.
8. Claims 23, 27, and 28 under 35 U.S.C. § 103(a) as unpatentable over Bellas, Boyce, Diegle, and Colson.
9. Claim 24 under 35 U.S.C. § 103(a) as unpatentable over Bellas, Boyce, Diegle, Beach, and Fetty.
10. Claim 25 under 35 U.S.C. § 103(a) as unpatentable over Bellas, Boyce, Diegle, Beach, Fetty, and Colson.²

ISSUE

The Examiner found that Bellas discloses a portable facility having an enclosure with means within the enclosure for lubricating bearings, and that it would have been obvious, in view of the teachings of various other references describing the servicing and reconditioning of bearings, to modify Bellas so as to have means for inspecting and repairing bearing components at the location near the defective bearing, race, and rolling element.

Ans. 4-5.

The Appellant notes that Bellas serves as the primary reference in each of the rejections and contends that one having ordinary skill in the art

² The Appellant also seeks the Board's review of the Examiner's objection to the drawings. Reply Br. 1-3. Such objections are reviewable by petition under 37 C.F.R. § 1.181 (*see Manual of Patent Examining Procedure* (MPEP) §§ 1002 and 1201) and are not within the jurisdiction of the Board. *In re Mindick*, 371 F.2d 892, 894 (CCPA 1967).

would not have been led to a portable facility for reconditioning bearings in light of the teaching in Bellas of a mobile automobile service unit in combination with any of the additional references relied upon by the Examiner. App. Br. 20-26.

The issue presented by this appeal is:

Has the Appellant demonstrated the Examiner erred in concluding that one having ordinary skill in the art would have been led to modify the mobile unit of Bellas to include the claimed means or equipment for inspecting and means or equipment for repairing in view of the prior art?

FINDINGS OF FACT

We find that the following enumerated findings are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

1. The Appellant's Specification describes a cone inspection station 92 as follows:

At the cone inspection station 92 a workman places the cone assembly 28 in a fixture which shines light into the cone 22 at the small ends of the rollers 24 around it such that the light passes between the cage 26 that confines the rollers 24 and the raceway 36 of the cone 22. While the cone 22 rotates slowly, the workman looks at the cone raceway 36 from the large ends of the rollers 24, that is over the thrust rib 38. By this visual observation as well as by touch and by a probe, the

workman determines if the raceway 36 exhibits damage, such as spalling or water etching or brinelling. The workman also inspects the rollers 24 for damage.

Finally, the workman, using a cone bore gauge at the station 92, measures the diameter of the bore that extends through the cone 22.

Spec. 11, l. 17 – Spec. 12, l. 4.

2. The Appellant's Specification describes a cup inspection and repair station 94 as follows:

At the station 94 a workman examines the cup 20, particularly its raceways 32, to determine if either raceway 32 exhibits excessive spalling or brinelling or bears water etching. Being rust, water etching is usually removed simply with a polishing tool. Some spalling can be removed with a hand-held grinding tool, but excessive spalling or overly deep brinell marks require replacement of the cup 20. With gauges the workman at the station 90 also measures the outside diameter of the cup 20 and the diameters of the counterbores 34.

Spec. 13, l. 21 – Spec. 14, l. 4.

3. The Appellant's Specification describes a cone repair station 114 as follows:

At the cone repairing station 114, a workman examines the raceway 36 of the cone 22 to determine if the raceway 36 can be restored. If the cone 22 contains too much spalling or excessive brinell markings, the cone 22 is discarded. In the case of minor spalling, the workman removes the spalling with a hand-held

grinder. The workman will also remove water etchings with a polishing tool. The cone 22, when so reconditioned, is joined with the rollers 24 on the transfer surface 100 that leads to the roller sizing station 116.

Spec. 12, l. 19 – Spec. 13, l. 2.

4. Bellas discloses a mobile unit for servicing automobiles including a van body portion that has sufficient side working space to enable mechanics to grease and replace wheel bearings. Bellas, col. 1, ll. 9-10 and col. 6, ll. 25-29.
5. Bellas does not disclose using its mobile unit to recondition wheel bearings. i.e., inspect and repair bearing components. In particular, Bellas does not disclose a workstation having a fixture capable of holding and rotating a bearing component and having a light, a probe, and one or more gauges capable of measuring bearing components; a work station having a polishing tool and a hand-held grinding tool; equipment for inspecting bearing races; or equipment for repairing a bearing.

PRINCIPLES OF LAW

When a claim uses the term “means” to describe a limitation, a presumption inheres that the inventor used the term to invoke § 112, ¶ 6. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1375 (Fed. Cir. 2003). “This presumption can be rebutted when the claim, in addition to the functional language, recites structure sufficient to perform the claimed function in its entirety.” *Id.*

Once a court concludes that a claim limitation is a means-plus-function limitation, two steps of claim construction remain: 1) the court must first identify the function of the limitation; and 2) the court must then look to the specification and identify the corresponding structure for that function. *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1210 (Fed. Cir. 2003).

“[T]he ‘broadest reasonable interpretation’ that an examiner may give means-plus-function language is that statutorily mandated in paragraph six.” *In re Donaldson*, 16 F.3d 1189, 1194-95 (Fed. Cir. 1994) (en banc). “[O]ne construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure.” *Id.* at 1193. “[T]he PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination.” *Id.* at 1195.

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3)

the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 550 U.S. at 406 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”) “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006), *cited with approval in KSR*, 550 U.S. at 418.

ANALYSIS

Claim Construction

Independent claims 1 and 8 use “means” to describe several claim limitations. The broadest reasonable interpretation that we may give means-plus-function language is statutorily mandated in 35 U.S.C. § 112, paragraph six. *Donaldson*, 16 F.3d at 1194-95. Claim 1 recites a portable facility for reconditioning an antifriction bearing including means for inspecting components of the bearing and means for repairing defects in components of the bearing. Claim 8 more specifically recites a portable facility for reconditioning a tapered roller bearing including means for inspecting the cone assembly, means for inspecting and repairing the raceway of the cup, and means for repairing the raceway of the cone.

The Appellant identified stations 92 and 94 as corresponding to the means for inspecting and stations 94 and 114 as corresponding to the means

for repairing of claims 1 and 8. App. Br. 3, 5. For claim 1, the function recited in the means for inspecting components of the bearing is inspecting bearing components, and the structure described in the Appellant's Specification corresponding to this function is a work station including a fixture capable of holding and rotating a bearing component and having a light, a probe, and one or more gauges capable of measuring the components (Facts 1, 2). The function recited in the means for repairing components of the bearing is repairing bearing components. The structure described in the Appellant's Specification corresponding to this function is a work station including a polishing tool and a hand-held grinding tool (Facts 2, 3).

For claim 8, the function recited in the means for inspecting the cone assembly is inspecting the cone assembly, and the structure described in the Appellant's Specification corresponding to this function is a work station including a fixture capable of holding and rotating a bearing component and having a light, a probe, and a gauge (Fact 1). The functions recited in the means for inspecting and repairing the raceway of the cup are inspecting and repairing the raceway of the cup, and the structure described in the Appellant's Specification corresponding to these functions is a work station including gauges capable of measuring the outside diameter of the cup and the diameters of the counterbores, a polishing tool, and a hand-held grinding tool (Fact 2). The function recited in the means for repairing the raceway of the cone is repairing the raceway of the cone, and the structure described in the Appellant's Specification corresponding to this function is a work station including a polishing tool and a hand-held grinding tool (Fact 3).

Claim 20 recites “equipment within the enclosure for inspecting the races” and “equipment within the enclosure for repairing the bearing.” Because the Appellant used “equipment” in place of “means” to recite the inspecting and repairing structure, we presume that the Appellant did not intend to invoke interpretation of the claimed “equipment” under § 112, sixth paragraph. The word “equipment,” however, does not provide sufficient structure to define what is being claimed by this element. As such, we conclude that the “equipment ... for” language invokes § 112, sixth paragraph.³ For claim 20, the function recited in the equipment for inspecting the races is inspecting races, and the structure described in the Appellant’s Specification corresponding to this function is a work station including a fixture capable of holding and rotating the cone and having a light, a probe, and a gauge capable of measuring the cone (Fact 1). The function recited in the equipment for repairing the bearing is repairing the bearing. The structure described in the Appellant’s Specification corresponding to this function includes a work station having a polishing tool and a hand-held grinding tool (Facts 2, 3).

³ The Appellants admit that the equipment within their portable enclosure is conventional. App. Br. 15-16, citing to Spec. 9, first full para. (“The facility A includes a variety of conventional equipment for reconditioning bearings B”). Compare *Ex parte Miyazaki*, 89 USPQ2d 1207, 1216-17 (BPAI 2008) (in which the Board declined to presume non-means language invoked § 112, sixth paragraph, when the claimed “sheet feeding area” at issue was the point of novelty of the invention.).

Rejection of claims 1-7 and 19

Claims 1-7 and 19 are rejected under 35 U.S.C. § 103 as being unpatentable over Bellas, Diegle, Sturm, and James. Ans. 4-6. Bellas discloses a mobile unit for servicing automobiles including a van body portion that has sufficient side working space to enable mechanics to grease and replace wheel bearings (Fact 4). As noted by the Appellant, servicing a wheel bearing by greasing or replacing the bearing is different from reconditioning a bearing, which requires the technician to remove the bearing from the wheel unit and disassemble, clean, inspect, repair, and reassemble the bearing components. App. Br. 15-16. Bellas does not disclose using its mobile unit to recondition, i.e., inspect and repair, wheel bearings (Fact 5). With respect to claim 1, Bellas does not disclose a workstation having a fixture capable of holding and rotating a bearing component and having a light, a probe, and one or more gauges capable of measuring bearing components or a work station having a polishing tool and a hand-held grinding tool or equivalents thereof (Fact 5). Thus, Bellas does not disclose the claimed means for inspecting or means for repairing bearing components, as recited in claim 1.

The Examiner relied on Diegle to teach removing, inspecting, cleaning, and replacing defective bearing parts and relied on Sturm and James to disclose means for inspecting and repairing bearing components. Ans. 5. However, neither Diegle, nor Sturm, nor James discloses or suggests that it would be desirable to recondition bearings in a mobile facility. Thus, absent hindsight, we see no reason, and the Examiner has not provided an

adequate articulation of a reason, why one having ordinary skill in the art would have been led in view of the disclosures in Bellas, Diegle, Sturm, and James to modify the mobile unit of Bellas to include workstations having the claimed means for inspecting and means for repairing bearing components.

Rejections of claims 8-12

Claims 8-12 are rejected under 35 U.S.C. § 103 as being unpatentable over Bellas, Diegle, Sturm, Colson, and Boyce (claims 8, 11, and 12) and further in view of Schaud (claim 9) or Dalton (claim 10).

As discussed *supra*, Bellas does not disclose using its mobile unit to recondition bearings, i.e., inspect and repair bearing components (Fact 5). With respect to claim 8, Bellas does not disclose a work station including a fixture capable of holding and rotating a cone assembly and having a light, a probe, and a gauge; a work station including gauges capable of measuring the outside diameter of the cup and the diameters of the counterbores, a polishing tool, and a hand-held grinding tool; or a work station including a polishing tool and a hand-held grinding tool (Fact 5). Thus, Bellas does not disclose the claimed means for inspecting the cone assembly, means for inspecting and repairing the raceway of the cup, and means for repairing the raceway of the cone, as recited in claim 8.

The Examiner relied on Diegle to teach removing, inspecting, cleaning, and replacing defective bearing parts, Sturm to teach means for inspecting the cone assembly, Colson to teach means for inspecting and repairing the raceway of the cup and the raceway of the cone, Boyce to teach

means for opening the cage and releasing the rollers and means for closing a new cage about the rollers on the cone, Schaub to teach means for installing a seal into a cup, and Dalton to teach means for measuring the end play in the bearing. Ans. 7-8. However, neither Diegle, nor Sturm, nor Colson, nor Boyce, nor Schaub, nor Dalton discloses or suggests that it would be desirable to recondition bearings in a mobile facility. Thus, absent hindsight, we see no reason, and the Examiner has not provided an adequate articulation of a reason, why one having ordinary skill in the art would have been led in view of the disclosures in Bellas, Diegle, Sturm, Colson, and Boyce, and further in view of Schaub or Dalton, to modify the mobile unit of Bellas to include workstations having the claimed means for inspecting the cone assembly, means for inspecting and repairing the raceway of the cup, and means for repairing the raceway of the cone.

Rejections of claims 20-29

Claims 20-29 are rejected under 35 U.S.C. § 103 as being unpatentable over Bellas, Boyce, and Diegle (claims 20, 26, 29) and further in view of Fetty (claim 21), or Parker (claim 22), or Colson (claims 23, 27, and 28), or Beach and Fetty (claim 24), or Beach, Fetty, and Colson (claim 25).

As discussed *supra*, Bellas does not disclose using its mobile unit to recondition bearings, i.e., inspect and repair bearing components (Fact 5). With respect to claim 20, Bellas does not disclose a work station including a fixture capable of holding and rotating a cone and having a light, a probe,

and a gauge; or a work station including a polishing tool and a hand-held grinding tool (Fact 5). Thus, Bellas does not disclose the claimed equipment for inspecting the races and equipment for repairing the bearing, as recited in claim 20.

The Examiner relied on Diegle to teach removing, inspecting, cleaning, and replacing defective bearing parts, Boyce to teach equipment for inspecting the races and equipment for repairing the bearing, Fetty to teach a bearing having seals located on the bearings, Parker to teach equipment for inspecting the races including a fixture which shines a light on the inner race, and Colson to teach equipment for inspecting the bearing including a gauge that measures the diameter of a bore that extends through the inner race. Ans. 9-11. However, neither Diegle, nor Boyce, nor Fetty, nor Parker, nor Colson discloses or suggests that it would be desirable to recondition bearings in a mobile facility. Thus, absent hindsight, we see no reason, and the Examiner has not provided an adequate articulation of a reason, why one having ordinary skill in the art would have been led in view of the disclosures in Bellas, Diegle, Boyce, Fetty, Parker, and Colson to modify the mobile unit of Bellas to include workstations having the claimed equipment for inspecting the races and equipment for repairing the bearing.

CONCLUSIONS

The Appellant has demonstrated the Examiner erred in concluding that one having ordinary skill in the art would have been led to modify the

Appeal 2008-4519
Application 09/819,194

mobile unit of Bellas to include the claimed means or equipment for inspecting and means or equipment for repairing in view of the prior art.

DECISION

The decision of the Examiner to reject claims 1-12 and 19-29 is
REVERSED.

REVERSED

Vsh

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